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## ( 6037 )

## A specimen of fome Observations made by a Microscope, contrived by M. Leewenhoeck in Holland, lately communicated by Dr. Regnerus de Graaf.

THE perfoncommunicating these Observations, by and by to be delivered, mentions in a Letter of his, written from Delpht April. 28. 1673. that one Mr. Leemenheeck hath lately contrived Microscopes excelling those that have been hitherto made by Eustachio Divini and others; adding, that he hath given a fpecimen of their excellency by divers Observations, and is ready to receive difficult tasks for more, if the Curious here shall please to fend him such: Which they are not like to be wanting in.

## The Observations themselves.

1. The Mould upon skin, flefh, or other things, hath been by fome represented to be shott out in the form of the stalks of Vegetables, fo as that fome of those stalks appeared with round knobs at the end, fome with bloffom-like leaves. But I do observe such Mould to shoot up first with a straight transparent stalk, in which stalk is driven up a globous substance, which for the most part places it felf at the top of the stalk, and is follow'd by another globul, driving out the first either side-ways. or at the top, and that is fucceeded by a third and more fuch globuls; all which make up at laft one great knob on the stalk. an hundred times thicker than the stalk it felf. And this knob indeed confifts of nothing elfe than of many fmall roundifh knobs, which being multiplied, the big knob begins to burft afunder, and then represents a kind of Bloffoms with Leaves.

2. The sting of a Beel field to be of another make than it hath been described by others. For I have observed in it two other stings, that are lodged within the thickness of the first sting, each having its peculiar sheath.

3. Further

3. Further I observe, on the Head of a Bee before, two artus or limbs with teeth, which I call Scrapers, conceiving them to be the organs wherewith the Bee scrapes the Waxy fubstance from the Plant. Besides, I find two other limbs, each having two Joints, which I call Arms, wherewith I believe this Insect performs its work and maketh the Combs. Moreover, there is also a little Body, which I call the Wiper, being rough and exceeding the other Limbs in thickness and length, by which I am apt to believe the Bee wipes the Honyfubstance from the Plant. All which five Limbs the Bee, when the doth not work, knows curiously to lay by close under her head, in very good order.

4. As to the *Eye* of the Bee, which I have taken out of the Head, exposing its innermost part to the Microscope; I find, that the Bee receives her light Just with the same shadow as we see the Hony-combs: Whence I am prone to collect, that the Bee works not by art or knowledge, but only after the pattern of the light received in the Eye.

5. In a Low/e I observe indeed, as others have done, a fhort tapering Nofe with an hole in it, out of which that Infect, when it will draw food, thrusts its sting, which, to my Eye, was at least five and twenty times less than one fingle But I find the head every where elfe very clofe round Hair. about, and without any fuch futures as some have repre-The Skin of the head is rough, refembling a skin fented it. that hath many dints in it. In the two Horns I find five Joints; others having marked but four. One Claw of her foot is of the structure of that of an Eagles, but the other of the same foot stands out straight, and is very small; and between these two claws there is a raised part or knob, the better to clasp and hold faft the hair.

so far this Observer: who doubtless will proceed in making and imparting more Observations, the better to evince the goodness of these his Glasses.

Extrat